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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,579	03/04/2002	Patrick Peterson	01-4004C	5046

32127 7590 04/22/2005

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EXAMINER

GAUTHIER, GERALD

ART UNIT	PAPER NUMBER
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2645

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/090,579

**Applicant(s)**

PETERSON ET AL.

**Examiner**

Gerald Gauthier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 5, 2004 has been entered.

***Claim(s) Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claim(s) under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claim(s) was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim(s) that was not commonly owned at the time a later invention was made in order for the

examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. **Claim(s) 1-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Perrone (US 6,418,199) in view of Benson et al. (US 2002/0067821) and in further view of Emerson et al. (US 5,845,276).

Regarding **claim(s) 1, 4, 7, 10**, Perrone discloses a method of visually representing user behavior within an interactive voice response system (14 on FIG. 1B) of a call-processing center (122 on FIG. 1C), in which the IVR system generates user prompts (FIG. 3A), including a first prompt (72 on FIG. 3A) generated upon entry of a user (2 on FIG. 1A) into the IVR system, and subsequent prompts triggered by data inputted by a user (2 on FIG. 1A) or by internal processing of the IVR system that cause a branching in a call flow (76 on FIG. 3A) within the IVR system (FIG. 3A-3E and column 1, lines 9-11), the method comprising the steps of:

modeling a call flow (column 9, line 4 "the incoming call") of the IVR system as a non deterministic finite-state machine, such that a start state of the finite-state machine represents a first prompt (column 9, line 8 "Welcome to the..") of the IVR system, other states of the finite-state machine represent subsequent prompts (column 9, line 18 "audible information to the caller") at which a branching occurs in the call flow of the IVR system, exit conditions are represented as end states (column 9, line 22 "presses the Submit buttons"), and transitions of the finite state machine represent transitions between call flow states triggered by data inputted by a user (2 on FIG. 1A) or by

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internal processing of the IVR system (FIG. 3A and column 9, lines 1-28) [The IVR systems stored information that identify the inbound call in a table of database and the information is used for further prompts];

providing the complete sequences of events for the plural calls to the finite-state machine (FIG. 3A and column 9, lines 42-54), such that:

for states with at least one child or subsequent state, there are provided state-transition counters, and for exit states, there are provided counters representing exit conditions from the IVR system, separating different levels of automation achieved (FIG. 3A, Table 1 and column 10, lines 19-28) [The active graphics and text items can be associated with the same hyperlink to conclude the IVR session].

Perrone fails to disclose generating and storing a complete sequence of events.

However, Benson teaches generating and storing a complete sequence of events (§ 0029, line 2 "updating the call log") within the IVR system for plural calls to the call processing center, the plural calls being recorded from end to end (§ 0029) [The update call log component update the call log with information receive from the calls and other information].

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify Perrone using the generating and storing a complete sequence of events as taught by Benson.

The modification of the invention would offer the capability of generating and storing a complete sequence of events such as the system would monitor call performance.

Perrone fails to disclose a two-way matrix of several counters.

However, Emerson teaches a two-way matrix of several counters (column 19, line 25 "setup report two-way matrix").

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify Perrone using the state transition two-way matrix as taught by Emerson.

The modification of the invention would offer the capability of the state transition two-way matrix such as the system would allow direct marketing personal to reduce their time.

Perrone fails to disclose visually representing data from the two-way matrix as a state-transition diagram.

However, Monaco teaches visually representing data from the two-way matrix as a state-transition diagram having states representing IVR system prompts and arcs representing user responses to the prompts or actions initiated by the IVR system (FIG. 18 and column 34, lines 58-67) [The IVR system is represented graphically by a state transition diagram for the request of the user and the response of the system.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify Perrone using the software creating the state transition diagram as taught by Monaco.

The modification of the invention would offer the capability of the state transition two-way matrix such as the system would allow the dialog to be handled by various created object in the software.

Regarding **claim(s) 2, 5, 8 and 11**, Perrone as modified discloses a method of visually representing user behavior within an interactive response system of a call processing center, wherein each node of the state-transition diagram represents one of a specific prompt in the call flow of the IVR system, a prompt with re-prompts and retries, and a complete subsection of the IVR system, which represents many different prompts (column 8, lines 58-65).

Regarding **claim(s) 3, 6, 9 and 12**, Perrone as modified discloses a method of visually representing user behavior within an interactive response system of a call processing center, wherein exit conditions in the state-transition diagram are represented by leaves, each of the leaves indicating one of a call resolved in the IVR system, a call transferred to a live agent, and a caller hanging up without obtaining useful information (column 11, lines 33-46).

Regarding **claim(s) 13-16**, Perrone, Benson, Emerson and Monaco disclose all the limitations of **claim(s) 13-16** as stated in **claim(s) 1**'s rejection and furthermore Perrone discloses modeling a contact flow of the automated response system (column 9, line 12 "the inbound call") as a non-deterministic finite-state machine (column 9, line 10 "your session number is"), such that a start state of the finite-state machine represents a first prompt of the automated response system (column 9, line 8 "Welcome to the.."), other states of the finite-state machine represent subsequent prompts (column 9, line 18 "audible information to the caller") at which a branching occurs in the contact

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flow of the automated response system, exit conditions are represented as end states (column 9, line 22 "presses the Submit buttons"), and transitions of the finite-state machine represent transitions between contact flow states triggered by data inputted by a user (2 on FIG. 1A) or by internal processing of the automated response system (column 9, lines 8-28) [The call flow information are store on the IVR system in association with the session identifier of the caller].

### ***Response to Arguments***

4. Applicant's arguments with respect to **claim(s) 1-16** have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerald Gauthier whose telephone number is (571) 272-7539. The examiner can normally be reached on 8:00 AM to 4:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**GERALD GAUTHIER**  
**PATENT EXAMINER**



g.g.

April 18, 2005

Gerald Gauthier  
Examiner  
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